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**SHINDAIWA OWNER'S/OPERATOR'S MANUAL**

**AH242s ARTICULATED  
HEDGE TRIMMER**



- Read this manual and familiarize yourself with its contents.
- Minimize the risk of injury to yourself and others.
- Always wear eye protection when operating this machine.
- Do not operate or service this machine unless you clearly understand this manual.
- Keep this manual available at all times so that you can reference it whenever you have a question about the use of this unit.

**shindaiwa**

Part Number 62853-94310 Rev. 9/08

# Introduction

The Shindaiwa 242 series of hand power tools has been designed and built to deliver superior performance and reliability without compromise to quality, comfort, or durability. Shindaiwa high performance engines represent the leading edge of 2-cycle engine technology, delivering exceptionally high power at remark-

## IMPORTANT!

The information contained in these instructions describes units available at the time of publication.

Shindaiwa Inc. reserves the right to make changes to products without prior notice, and without obligation to make alterations to units previously manufactured.

able low displacement and weight. As an owner/operator, you'll soon discover for yourself why Shindaiwa is simply in a class by itself!

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## IMPORTANT!

The procedures described in this manual are intended to help you get the most from your unit as well as to protect you and others from harm. These procedures are guidelines for safe operation under most conditions, and are not intended to replace any safety rules and/or laws that may be in force in your area. If you have questions regarding your power tool, or if you do not understand something in this manual, your Shindaiwa dealer will be glad to assist you. You may also contact Shindaiwa at the address printed on the back of this Manual.


# Attention Statements

Throughout this manual are special "attention statements".



**DANGER!**

A statement preceded by the triangular attention symbol and the word "DANGER" contains information that should be acted upon to prevent serious injury or death.



**WARNING!**

A statement preceded by the triangular attention symbol and the word "WARNING" contains information that should be acted upon to prevent serious bodily injury.

**CAUTION!**

A statement preceded by the word "CAUTION" contains information that should be acted upon to prevent mechanical damage.


**IMPORTANT!**


A statement preceded by the word "IMPORTANT" is one that possesses special significance.


**NOTE:**

A statement preceded by the word "NOTE" contains information that is handy to know and may make your job easier.

# Safety and operation labels

- 

An articulated hedge trimmer has the potential to cause serious personal injury to the operator or bystanders if misused, abused or mishandled. You must observe all special safety instructions to reduce the risk of personal injury.
- 

Read and follow this manual, make sure anyone using the trimmer does likewise. Failure to do so could result in serious personal injury or machine failure. Keep this manual for future reference.
- 

Always wear a hard hat to reduce the risk of head injuries during operation of this machine. In addition, always wear eye and hearing protection. Shindaiwa recommends wearing a face shield as additional face and eye protection.

- 

Wear heavy duty, non-slip gloves.
- 

Safety tip shoes or boots with non-slip sole should be worn.
- 

This product conducts electricity. Keep the product and/or operator a minimum distance of 10 meters away from electrical sources and power lines.

- 

Keep bystanders at least 15 meters away from the operating trimmer to reduce the risk of being struck by falling objects or thrown debris.
- 

The blades / cutting attachments are SHARP! Handle with care.
- 

Be aware of the danger of falling debris.
- 

Sound Power Level (measured in accordance with 2000/14/EC).

## Safety



### DANGER!



#### THE ARTICULATED HEDGE TRIMMER IS NOT INSULATED AGAINST ELECTRICAL SHOCK!

Approaching or contacting electrical lines with the trimmer could cause death or serious injury. Keep the trimmer at least 10 meters away from electrical lines or branches that contact electrical lines.

An articulated hedge trimmer has the potential to cause serious personal injury to the operator or bystanders if misused, abused or mishandled. To reduce the risk of injury, you must maintain control at all times, and observe all safety precautions during operation. Never permit a person without training or instruction to operate this trimmer!



### WARNING!

Do not make unauthorized modifications or alterations to your articulated hedge trimmer or its components.



### WARNING!



Never operate this tool or any other power equipment if you are tired, ill, or under the influence of alcohol, drugs, or any substance that could affect your ability or judgement.

## Operating Precautions



### WARNING!

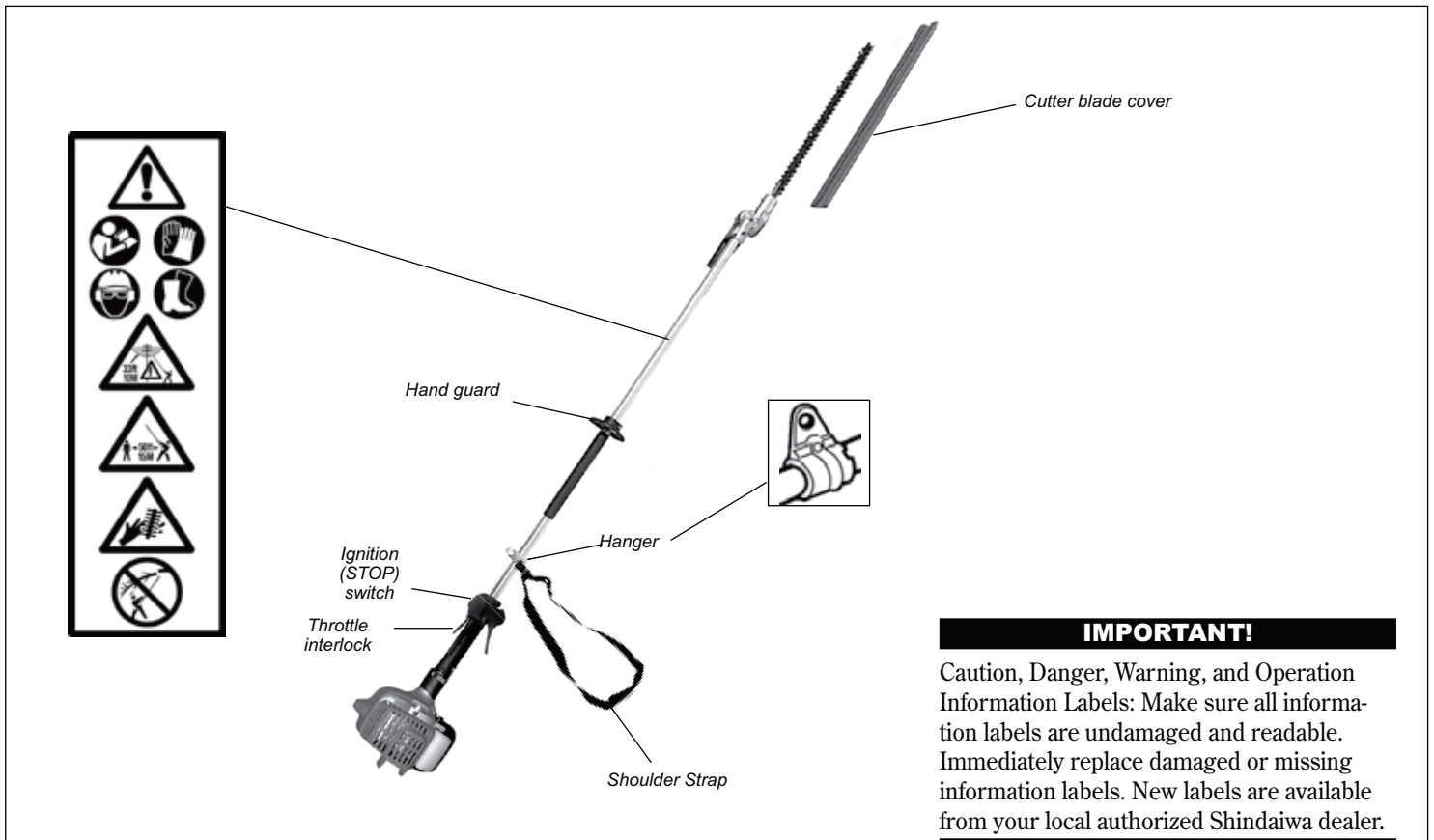
- Never transport the articulated hedge trimmer or leave it unattended with the engine running. An engine that's running could be accidentally accelerated causing the blades to oscillate.
- Make sure that the blade cover is in place when transporting or storing the articulated hedge trimmer.
- Always make sure that the cutter attachment and all handles and guards are properly installed and firmly tightened before operation.
- Inspect for broken, missing or improperly installed parts or attachments.
- Never use a cracked or warped cutter or cutter bar: replace it with a serviceable one and make sure it fits properly.
- Make sure there are no missing or loose fasteners, and that the stop switch and throttle controls are working properly.
- Make sure there is always good ventilation when operating the articulated hedge trimmer. Fumes from engine exhaust can cause serious injury or death. Never run the engine indoors!
- Never smoke or light fires near the hedge trimmer. Keep the unit away from excessive heat. Engine fuel is very flammable and fire could lead to serious personal injury or property damage.
- When carrying the articulated hedge trimmer by hand, the cutter attachment should be pointing backward with the cutter blade in the retracted or transporting position. (Refer to the section, "Transporting the Articulated Hedge Trimmer".)
- Do not operate this machine with the muffler removed.
- Make sure the cutters are correctly adjusted before operating the articulated hedge trimmer (see the section "Cutter Adjustment" for cutter adjustment procedures). Never attempt cutter adjustment with the engine running!
- Before starting the engine, make sure the cutter is not contacting anything.
- Always confirm safe operation when using the machine, especially when operating on steps or a ladder.
- Immediately stop the engine with the stop switch if the machine suddenly begins to vibrate or shake.
- Always stop the engine immediately and check for damage if you strike a foreign object or if the machine becomes tangled. Do not operate with broken or damaged equipment.
- When cutting a branch that is under tension, be alert for spring-back so that you will not be struck by the moving branch.
- If a cutter should bind fast in a cut, shut off the engine immediately. Push the branch or tree to ease the bind and free the cutter.
- Always stop the engine and allow it to cool before refueling. Avoid overfilling and wipe off any fuel that may have spilled.
- To reduce fire hazard, keep the engine and muffler free of debris, leaves, or excessive grease.

### CAUTION!

- Always maintain the articulated hedge trimmer according to this owner's manual and follow the recommended scheduled maintenance.
- Never modify or disable any of the hedge trimmer's safety devices. Doing so may cause damage and lead to personal injury.
- Always use genuine Shindaiwa parts and accessories when repairing or maintaining this machine.
- Do not make unauthorized modifications to the articulated hedge trimmer or its components.
- Keep the cutters sharp and properly adjusted.
- Never allow the engine to run at high without a load. Doing so could damage the engine.
- When transporting the hedge trimmer in a vehicle, tie it down securely to prevent fuel spillage or damage to the machine.
- Always stop the engine and allow it to cool before refueling. Avoid overfilling and wipe off any fuel that may have spilled.
- Never place flammable material close to the engine muffler and never run the engine without the spark arrestor screen in place.
- Always clear your work area of trash or hidden debris to help ensure good footing.
- Keep the articulated hedge trimmer as clean as possible. Keep it free of loose vegetation, mud, etc.

## Safety (continued)

### Safety Equipment and Labels



#### **IMPORTANT!**

Caution, Danger, Warning, and Operation Information Labels: Make sure all information labels are undamaged and readable. Immediately replace damaged or missing information labels. New labels are available from your local authorized Shindaiwa dealer.

### Operator Safety

Always wear a hard hat to reduce the risk of head injuries during operation of this machine.

ALWAYS protect yourself from hazards such as thorny brush and flying debris by wearing gloves and close fitting clothing that covers arms and legs. Never wear shorts. Don't wear loose clothing or items such as jewelry that could get caught in machinery or underbrush. Secure long hair so it is above shoulder level.



This machine is designed for trimming hedges. Do not use this machine for other purposes.

Always wear eye and hearing protection. Shindaiwa recommends wearing a face shield as additional face and eye protection.

Always operate with both hands firmly gripping the machine.

Keep a proper footing and do not overreach—maintain your balance at all times during operation.

ALWAYS be aware of your surroundings and alert to any danger that you may not hear due to machine noise.

Wear sturdy footwear with nonslip soles to provide good footing. Steel-toed safety boots are recommended. Never operate machine bare-footed.



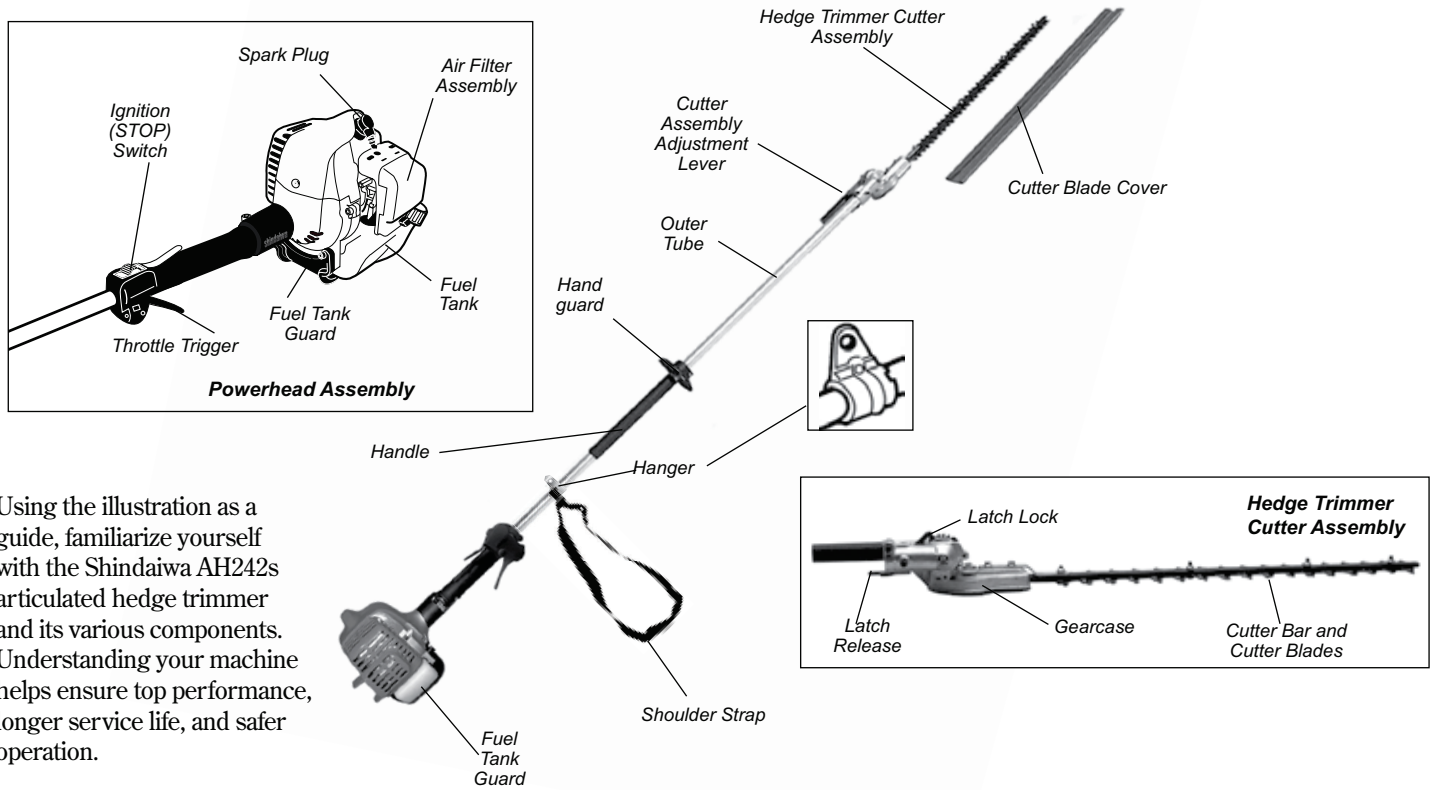
ALWAYS clear your work area of trash or hidden debris that could be thrown back at you or toward a bystander.

NEVER allow children to use the unit. Avoid operating near bystanders or when children are nearby.

Keep bystanders at least 15 meters away from the operating trimmer to reduce the risk of being struck by falling objects or thrown debris.

ALWAYS wear close-fitting clothing. Gloves offer added protection and are strongly recommended. Do not wear clothing or jewelry that could get caught in machinery.

## Product Description



Using the illustration as a guide, familiarize yourself with the Shindaiwa AH242s articulated hedge trimmer and its various components. Understanding your machine helps ensure top performance, longer service life, and safer operation.

## Specifications

Model Name	AH242s/EC2
Engine Model	S242EC2
Engine Type	2-cycle catalyst
Dry Weight	6.2 kg.
Bore x Stroke	33 x 28 mm
Displacement	23.9cc
Engine Speed at Maximum Power Output	8,000 min <sup>-1</sup>
Maximum Power Output	0.8 kW
Engine Speed at Idling	2,750 min <sup>-1</sup>
Maximum Engine Speed	12,000 min <sup>-1</sup>
Fuel/Oil Ratio	50:1 with ISO-L-EGD or JASO FC class 2-cycle mixing oil
Fuel Tank Capacity	620 ml
Carburetor	Walbro WYK diaphragm type
Ignition System	One-piece electronic transistor-controlled
Spark Plug	NGK BPMR6A
Air Filter	Non-reversible foam filter element
Starting Method	Recoil Starter
Stopping Method	Slide Switch
Cooling System	Forced Air
Transmission Type	Automatic, centrifugal clutch with bevel gear
Blade Length	567 mm
Cutter Drive	Spur Gear
Gear Lubricant	Lithium Based Grease
Sound Pressure Level *	
Idling	73 dB (A)
Racing	97 dB (A)
Sound Power Level **	102 dB (A)
Vibration Level ***	
Idling [Front/Rear]	2.0/2.3 m/s <sup>2</sup>
Racing [Front/Rear]	9.2/7.6 m/s <sup>2</sup>

Specifications are subject to change without notice.

\*Sound Pressure Level: in accordance with ISO 11680-1

\*\*Sound Power Level: in accordance with ISO 11680-1 (average data between at idling and Racing)

\*\*\*Vibration Level: in accordance with ISO 11680-1

# Assembly

## Prior To Assembly

Before assembling, make sure you have all the components required for a complete unit:

- Engine assembly
- Outer tube/cutter assembly
- Strap

- Kit with this manual and tool kit for routine maintenance.
- Cutter blade cover

Carefully inspect all components for damage.

### IMPORTANT!

The terms “left”, “left-hand”, and “LH”; “right”, “right-hand”, and “RH”; “front” and “rear” refer to directions as viewed by the operator during normal operation.

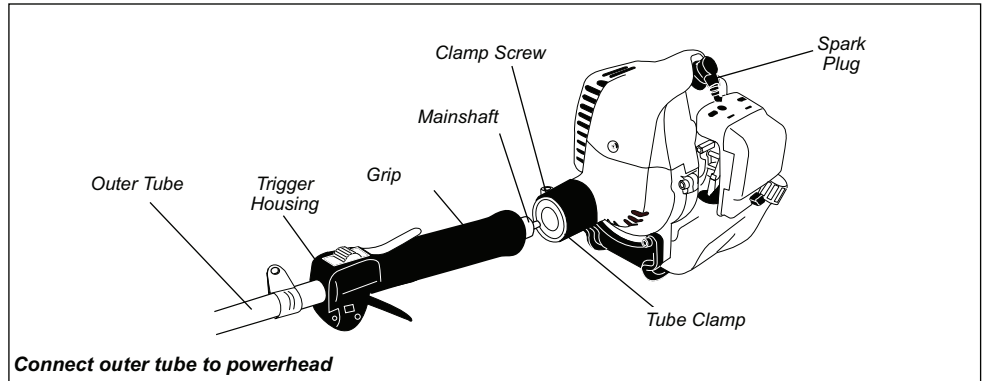
## Connect the Outer Tube to the Powerhead

1. Place the powerhead on a clean, flat surface, spark plug facing up.
2. Use the 4 mm hex wrench to loosen the tube clamp screw.
3. Slide the outer tube into the tube clamp until the tube bottoms. If installation is difficult, rotate the outer tube or main shaft slightly until you feel the mainshaft splines engage with the powerhead.

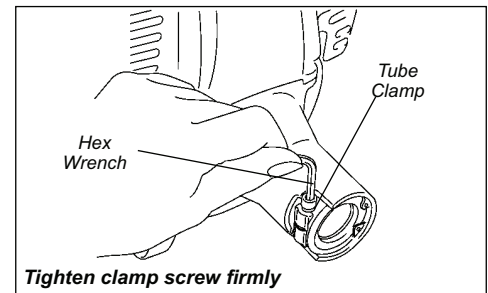
### CAUTION!

Do not force the shaft tube into the powerhead! Excessive force can damage the shaft tube and mainshaft.

4. Position the outer tube so that the gearcase output shaft is facing left on muffler cover.



5. Slide the outer tube into the powerhead until the throttle grip just contacts the tube clamp.
6. Tighten the clamp screw firmly.

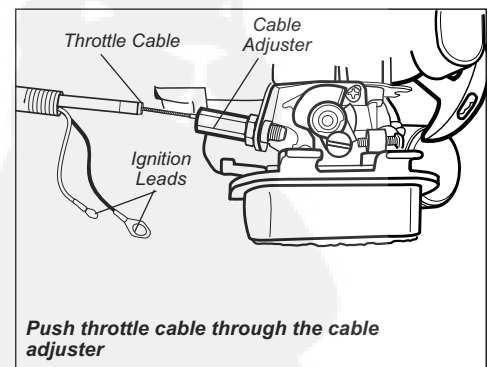
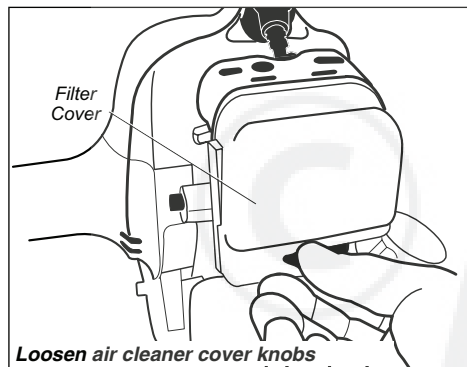


## Connect the Throttle Cable

1. Loosen the air cleaner cover knob and remove the air cleaner cover.
2. Loop the ribbed cable tube under the tube and to the top left side of the engine and push cable through the cable adjuster.

### NOTE

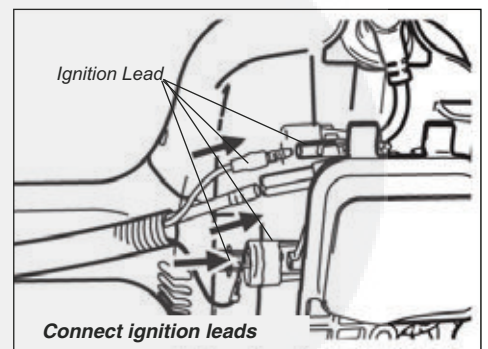
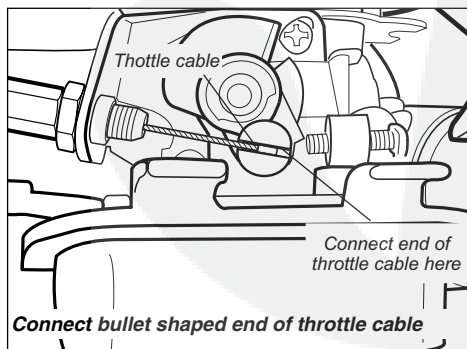
Make sure the ribbed cable tube is on the left side of the engine before connecting the throttle cable.



3. Connect the bullet shaped end of the throttle cable to the throttle lever on top of the carburetor.
4. Connect ignition leads.

### CAUTION!

Wiring runs must not interfere with throttle operation.



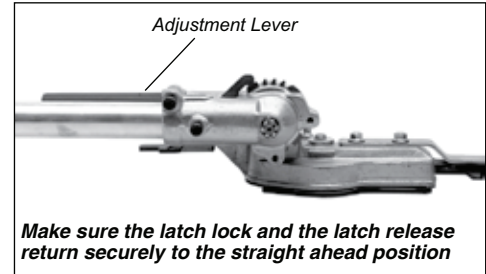
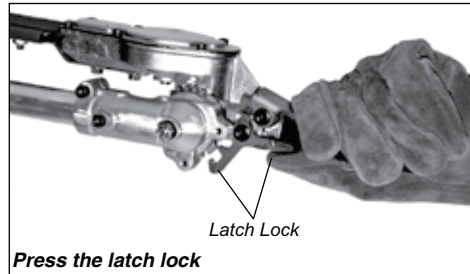
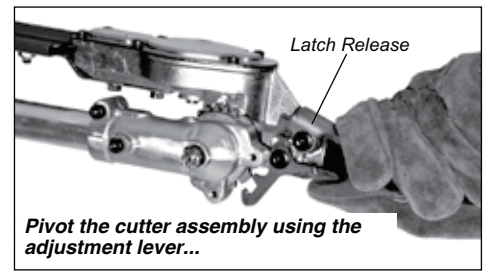
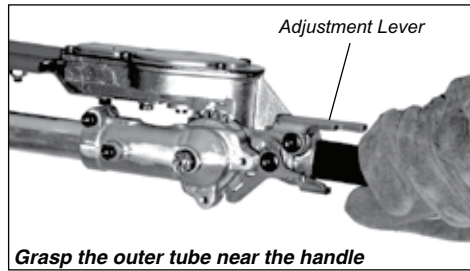
## Assembly (continued) Adjusting the Hedge Trimmer Cutter Assembly



### WARNING!

- The cutter blades are very sharp. Do not grasp the blades with your hands. Always use gloves when working near the cutter assembly.
- Do not allow the blades to contact your body.
- Do not touch the cutter blades when the engine is running. The blades can oscillate even if the engine is idling.

1. Position the hedge trimmer on a flat, level surface with the engine resting on the fuel tank guard. Make sure the scabbard is in place on the blade.
2. With your right hand, grasp the outer tube near the handle. With your left hand, grip the adjustment lever on the cutter assembly. With the index finger of your left hand, press the latch release. With your left thumb, press the latch lock.



3. While holding the latch release down, pivot the cutter assembly using the adjustment lever until it is at the desired cutting angle.
4. Release the latch lock and the latch release. Make sure the latch lock and the latch release return securely to the straight ahead position.

### IMPORTANT!

The latch lock provides an interlock to help prevent inadvertent depression of the latch release.

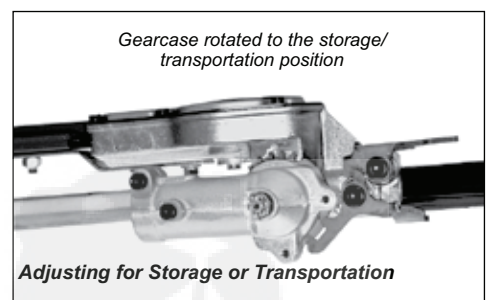
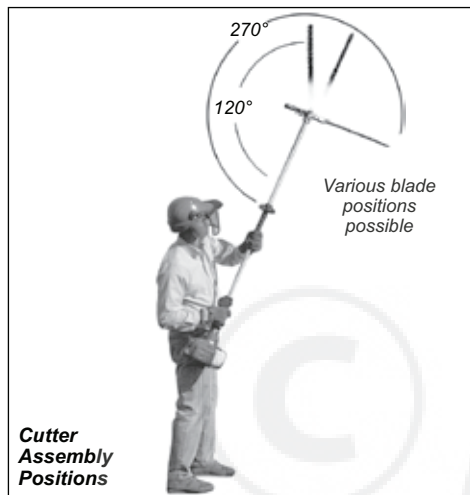
5. Remove the cover from the cutter blade. The engine now may be started (refer to the section "Starting the Engine").

## Cutter Assembly Positions

The cutter assembly can be adjusted to eleven different positions ranging from 120° to 270° from the outer tube as shown. Always make sure the lock latch is securely locked after each adjustment.

### Adjusting for Storage or Transportation

1. With the engine off, install the scabbard onto the blade.
2. Using the procedures described on the previous page, rotate the cutter assembly so it is parallel to the tube. Make sure the latch lock and the latch release return securely to a locking position.
3. Make sure the scabbard is in place on the cutters before storing or transporting.



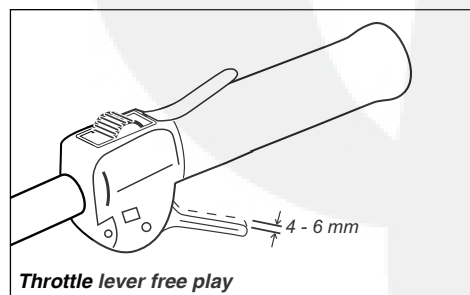
### WARNING!

Never run the engine when adjusting the cutter assembly to the storage position.

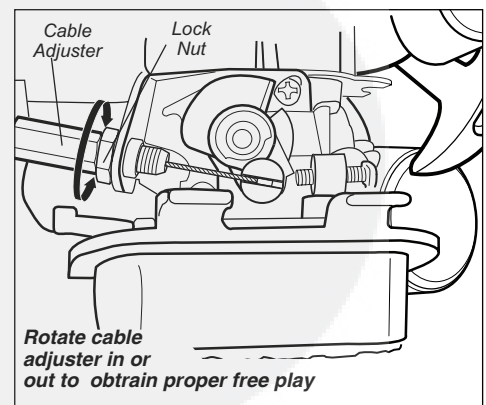
## Throttle lever free play

The throttle lever free play should be approximately 4 - 6 mm. Make sure that the throttle lever operates smoothly without binding. If it becomes necessary to adjust the lever free play, follow the procedures and illustrations that follow.

1. Loosen the air cleaner cover knob(s) and remove the air cleaner cover.
2. Loosen the lock nut on the cable adjuster. Turn the cable adjuster in or out as required to obtain proper free play 4 - 6 mm.



3. Tighten the locknut.
4. Reinstall the air cleaner cover.



## Mixing fuel

### CAUTION!

- Never use any type of gasoline containing more than 10% alcohol by volume! Some types of gasoline contain alcohol as an oxygenate. Oxygenated gasoline may cause increased operating temperatures. Under certain conditions, alcohol-based gasoline may also reduce the lubricating qualities of some 2-cycle mixing oils.
- Generic oils and some outboard oils may not be intended for use in high-performance 2-cycle engines, and should never be used in your Shindaiwa engine.

### CAUTION!

This engine is designed to operate on a 50:1 mixture consisting of unleaded gasoline and ISO-L-EGD or JASO FC class 2-cycle mixing oil only. Use of non-approved mixing oils can lead to excessive carbon deposits.

- Use only fresh, clean unleaded gasoline with a pump octane of 87 or higher.
- Mix all fuel with a 2-cycle air-cooled mixing oil that meets or exceeds ISO-L-EGD and/or JASO FC classified oils at 50:1 gasoline/oil ratio.


### CAUTION!


Mix and pour fuel outdoors where there are no sparks and flames.

### Examples of 50:1 mixing quantities

Gasoline liters	2-cycle mixing oil milliliters
2.5 - 1	50 ml
5 - 1	100 ml
10 - 1	200 ml
20 - 1	400 ml

### IMPORTANT!

Mix only enough fuel for your immediate needs! If fuel must be stored longer than 30 days and  oil with fuel stabilizer is not used, it should first be treated with a fuel stabilizer such as STA-BIL™.

 Oil is a registered JASO FC classified oil and also meets or exceeds ISO-L-EGD performance requirements. Shindaiwa One is recommended for use in all Shindaiwa low emissions engines. Shindaiwa One also includes a fuel stabilizer.

## Filling the fuel tank



### WARNING! Minimize the Risk of Fire

- **NEVER** smoke or light fires near the engine.
- **ALWAYS** stop the engine and allow it to cool before refueling.
- **ALWAYS** Wipe all spilled fuel and move at least 3 meters (10 feet) from the fueling point and source before starting.
- **NEVER** place flammable material close to the engine muffler.
- **NEVER** operate the engine without the muffler and spark arrester screen in place and in good working condition.

### ■ FUEL IS HIGHLY FLAMMABLE.

- **ALWAYS** store gasoline in a container approved for flammable liquids.
- **ALWAYS** inspect the unit for fuel leaks before each use. During each refill, check that no fuel leaks from around the fuel cap and/or fuel tank. If fuel leaks are evident, stop using the unit immediately. Fuel leaks must be repaired before using the unit.
- **ALWAYS** move the unit at least 3 meters (10 feet) away from a fuel storage area or other readily flammable materials before starting the engine.

1. Place the unit on a flat, level surface.
2. Clear any dirt or other debris from around the fuel filler cap.

### CAUTION!

Slowly remove the fuel cap only after stopping the engine

3. Remove the fuel cap, and fill the tank with clean, fresh fuel.
4. Reinstall the fuel filler cap and tighten firmly.
5. Wipe away any spilled fuel before starting engine.



# Starting the Engine

## IMPORTANT!!

Engine ignition is controlled by a two position switch mounted on the throttle housing labeled, "I" for ON or START and "O" for OFF or STOP.



### WARNING!

Never start the engine from the operating position.

1. Slide the ignition switch to the "I" position.
2. Press the primer bulb until fuel can be seen flowing in the transparent return tube.

## IMPORTANT!

The primer system only pushes fuel through the carburetor. Repeatedly pressing the primer bulb will not flood the engine with fuel.

3. Set the choke lever to the CLOSED position if engine is cold.
4. While holding the outer tube firmly with left hand, use your other hand to slowly pull the recoil starter until resistance is felt, then pull quickly to start the engine.

### CAUTION!

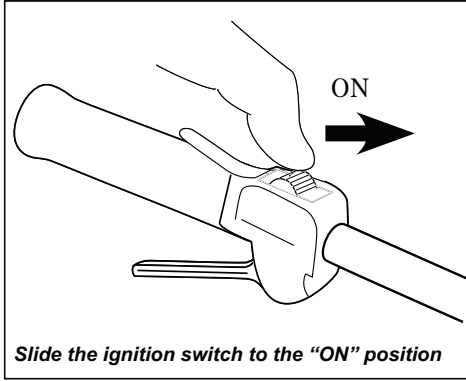
Do not pull the recoil starter to the end of the rope travel. Pulling the recoil starter to the end of the rope travel can damage the starter.



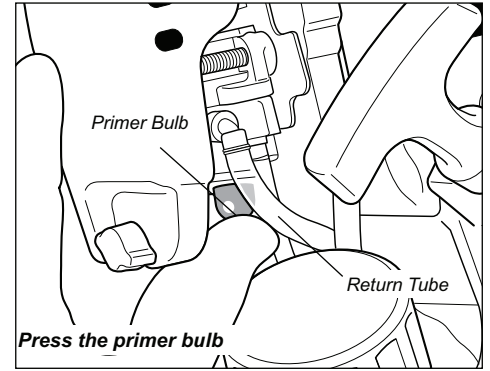
### WARNING!

When the engine is running, even at idle, the cutter blade may move (oscillate) when the engine is started! Keep your hands and your body away from the cutter assembly while starting the engine!

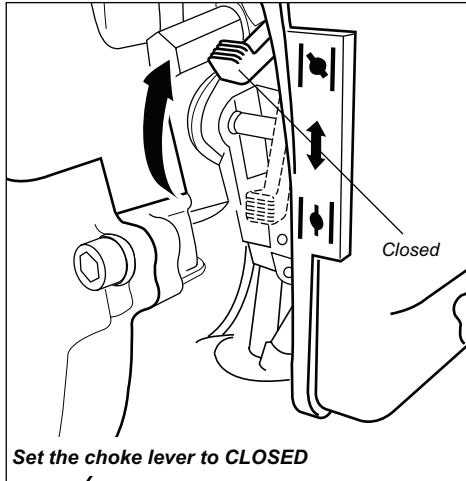
5. When the engine starts, slowly move the choke lever to the "OPEN" position. If the engine stops after the initial start, close the choke and restart.



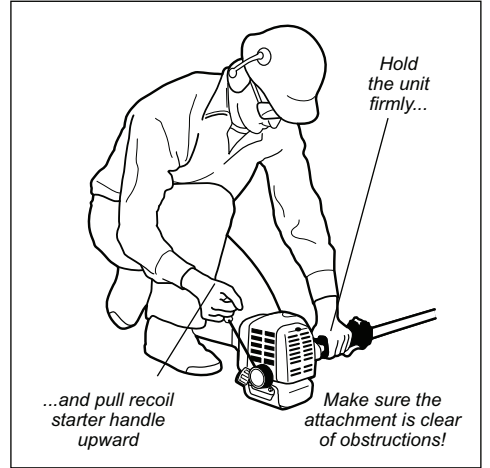
Slide the ignition switch to the "ON" position



Press the primer bulb

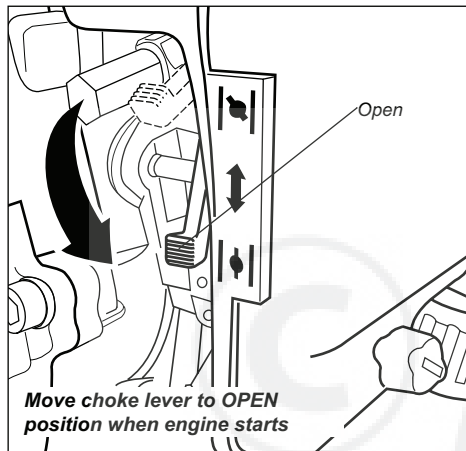


Set the choke lever to CLOSED



...and pull recoil starter handle upward

Make sure the attachment is clear of obstructions!



Move choke lever to OPEN position when engine starts

## IMPORTANT!

If the engine fails to start after several attempts with the choke in the closed position, the engine may be flooded with fuel. If flooding is suspected, move the choke lever to the open position and repeatedly pull the recoil starter to remove excess fuel and start the engine. If the engine still fails to start, refer to the troubleshooting section of this manual.

## Starting A Flooded Engine

1. Disconnect the spark plug lead and use the spark plug wrench to remove the spark plug (turn counter clockwise to remove).
2. Slide the ignition switch to the "O" (STOP) position.
  - If the spark plug is fouled or soaked with fuel, clean the plug as necessary.
3. Open the choke and fully depress the throttle lever with your left hand, then pull the starter handle rapidly with your right hand to clear excess fuel from the combustion chamber.
4. Reinstall the spark plug and tighten it firmly. If a torque wrench is available, torque the spark plug to 17–19 N·m (150–168 lb.-in.).
5. Repeat the starting procedure for a warm engine.
6. If the engine still fails to start, refer to the troubleshooting section near the end of this manual.

## Starting the engine (continued)

### When the Engine Starts...

- After the engine starts, allow the engine to warm up at idle 2 or 3 minutes before operating the unit.
- After the engine is warm, pick up the unit and clip on the shoulder strap.

- Advancing the throttle makes the cutting attachment move faster; releasing the throttle permits the attachment to stop moving. If the cutting attachment continues to move

when the engine returns to idle, carburetor idle speed should be adjusted (see “Adjusting Engine Idle”).

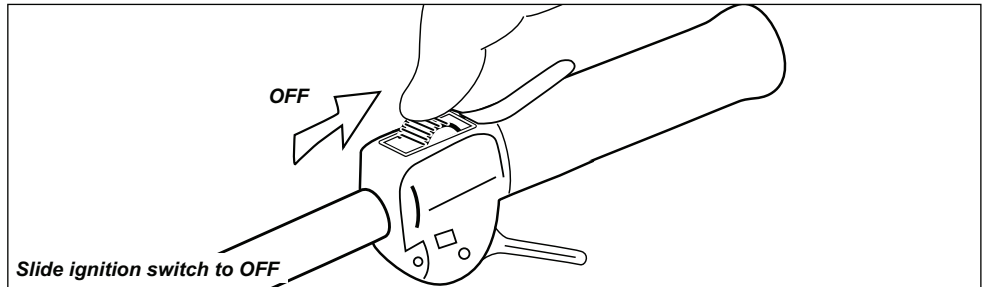
## Stopping the Engine

Idle the engine briefly before stopping (about 2 minutes), then slide the ignition switch to the “O” (Engine OFF) position.



### WARNING!

The cutting attachment can continue moving after the engine is stopped!



## Adjusting Engine Idle

The engine must return to idle speed whenever the throttle lever is released. Idle speed is adjustable, and must be set low enough to permit the engine clutch to disengage the cutting attachment.



### WARNING!

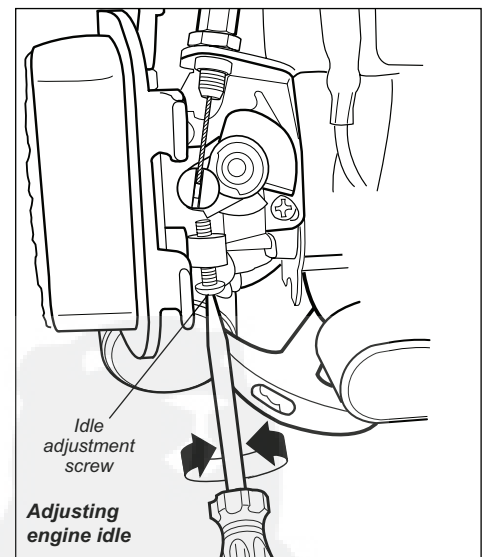
The cutting attachment must NEVER move at engine idle! If the idle speed cannot be adjusted by the procedure described here, return the unit to your Shindaiwa dealer for inspection.

### Idle Speed Adjustment

1. Place the trimmer on the ground, then start the engine, and then allow it to idle 2-3 minutes until warm.
2. If the attachment moves when the engine is at idle, reduce the idle speed by turning the idle adjustment screw counter-clockwise.
3. If a tachometer is available, the engine idle speed should be final adjusted to 3,000 ( $\pm 250$ )  $\text{min}^{-1}$ .

### NOTE

Carburetor fuel mixture adjustments are preset at factory and cannot be serviced in the field



## Checking Unit Condition

NEVER operate the unit with the protective devices removed!

Use only authorized Shindaiwa parts and accessories with your Shindaiwa hedge trimmer. Do not make modifications to this unit without written approval from Shindaiwa, Inc.

ALWAYS make sure the cutting attachment is properly installed and firmly tightened before operation.

NEVER use a cracked or warped cutting attachment: replace it with a serviceable one.

ALWAYS make sure the cutting attachment fits properly into the appropriate attachment holder. If a properly installed attachment vibrates, replace the attachment with new one and re-check.

ALWAYS stop the engine immediately and check for damage if you strike a foreign object or if the unit becomes tangled. Do not operate with broken or damaged equipment.

NEVER allow the engine to run at high speeds without a load. Doing so could damage the engine.

NEVER operate a unit with worn or damaged fasteners or attachment holders.

When transporting, make sure the engine is not running and the blade is covered with the blade cover.

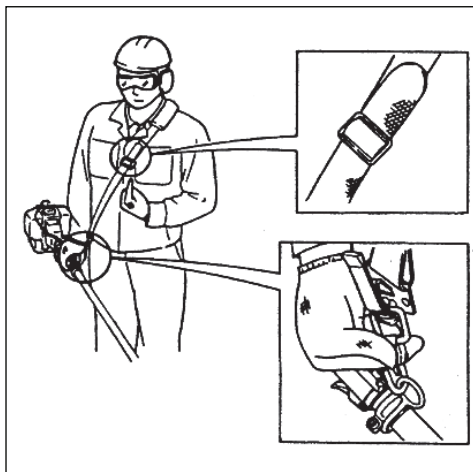
## Operation

### Shoulder Strap

1. Hook the strap hook to the hanger on the outer tube.
2. Wear the shoulder strap so that the hook stays at your right hand side.
3. Adjust the length of the shoulder strap so that you can hold and operate the machine comfortably.

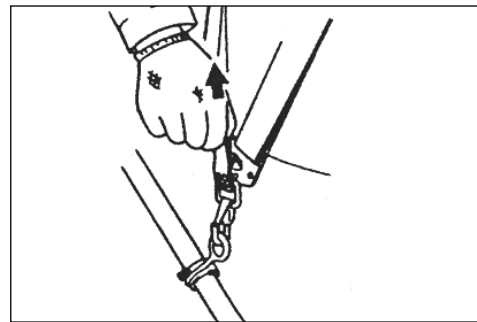
#### **IMPORTANT!**

Adjust the shoulder strap or harness so the shoulder pad rests comfortably on the off-side shoulder. Make sure all hooks and adjustment devices are secure.



### Emergency Release

In case of emergency, strongly pull the white tab at the hook. The machine will be released from the strap.



## Safe Operation

This machine is designed especially for trimming hedges.

Never use this machine for any other purposes. Never try to cut stones, metals, plastics or any other hard objects. Using this Articulated Hedgetrimmer for other purposes than trimming hedges may damage the machine or cause serious injury.

### Before trimming:

- Wear suitable protective clothing and equipment. See the section “Safety: The Properly Equipped Operator” for information.
- Choose the best working position for safety against the falling objects (branches, etc.).

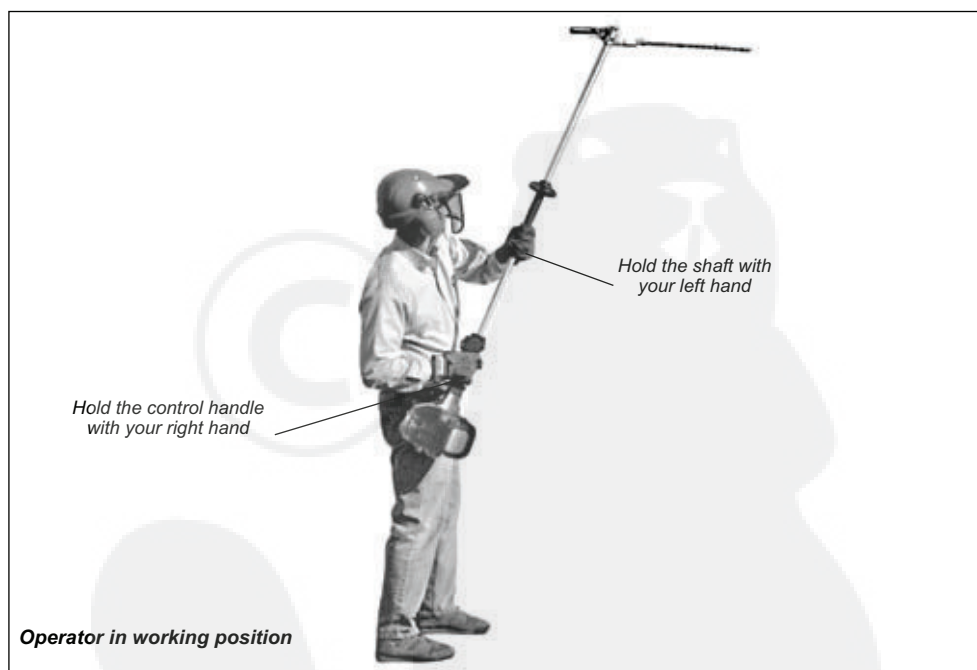
- Start the engine.
- Put on the strap.
- Rest when you feel fatigued.
- Never stand directly underneath the branch you are cutting. Be aware of falling branches. Note that a branch may spring back at you after it hits the ground.

## Working Position

- Hold the control handle with your right hand, and the shaft with your left hand.
- Your left arm should be extended to the most comfortable position.

#### **NOTE:**

Rest when you feel fatigued.



## Operation (continued)

### Using the Hedge Trimmer

#### Preparations

Use lopping shears to cut out thick branches first.

#### Cutting Sequence

If a radial cut is necessary, cut a little at a time in several passes.

#### Cutting Techniques

##### Vertical Cut:

Swing the blade up and down in an arc as you move along the hedge. Use both sides of the cutting blade.

Cut without standing directly next to the hedge, e.g. with a flower bed between operator and hedge.

##### Overhead Cut:

Hold the shaft upright with a 90° blade angle to cut an upper surface of a hedge.

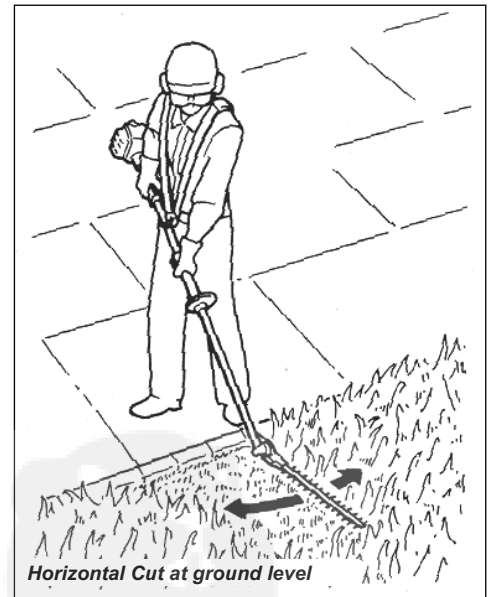
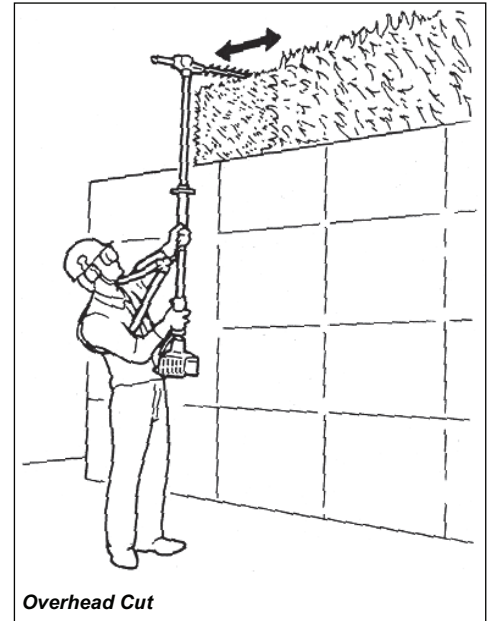
##### Horizontal Cut:

Hold the cutting blade at an angle of 0° to 10° as you swing the hedge trimmer horizontally.

Swing the blade in an arc towards the outside of the hedge so that the cuttings are swept on to the ground.

Cut without standing directly in front of the hedge, e.g. reach over a flower bed.

Cut close to the ground from a standing position, e.g., for low shrubs.



# Maintenance

## General maintenance

### IMPORTANT!

MAINTENANCE, REPLACEMENT OR REPAIR OF EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY REPAIR ESTABLISHMENT OR INDIVIDUAL; HOWEVER, WARRANTY REPAIRS MUST BE PERFORMED BY A DEALER OR SERVICE CENTER AUTHORIZED BY SHINDAIWA CORPORATION THE USE OF PARTS THAT ARE NOT EQUIVALENT IN PERFORMANCE AND DURABILITY TO AUTHORIZED PARTS MAY IMPAIR THE EFFECTIVENESS OF THE EMISSION CONTROL SYSTEM AND MAY HAVE A BEARING ON THE OUTCOME OF A WARRANTY CLAIM.

### NOTE!

Using non-standard replacement parts could invalidate your Shindaiwa warranty.

## Cutter blade adjustment

### WARNING!

The cutter blades are very sharp! Always wear gloves when working around the cutter assembly.

Cutting performance of your machine depends a great deal on proper cutter blade adjustment. Properly adjusted blades will oscillate freely yet help prevent binding of cut material between blades. Adjust blades as follows:

1. Loosen all blade locknuts at least one full turn.
2. Tighten each blade shoulder bolt firmly, and then loosen the shoulder bolts 1/4 to 1/2 turn.

## Daily maintenance

Prior to each work day, perform the following:

- Remove all dirt and debris from the engine, check the cooling fins and air cleaner for clogging, and clean as necessary.
- Carefully remove any accumulations of dirt or debris from the muffler and fuel tank. Check cooling air intake area at base of crankcase. Remove all debris. Dirt build-up in these areas can lead to engine overheating, fire, or premature wear.
- Lubricate the blades before use and after refueling. Check the cutters for damage or incorrect adjustment.

### WARNING!

Non-standard accessories, cutting attachment, or replacement parts may not operate properly with your unit and may cause damage and lead to personal injury.

## Muffler

This unit must never be operated with a faulty or missing spark arrester or muffler. Make sure the muffler is well secured and in good condition. A worn or damaged muffler is a fire hazard and may also cause hearing loss.

## Spark Plug

Keep the spark plug and wire connections tight and clean.

### WARNING!

Before performing any maintenance, repair, or cleaning work on the unit, make sure the engine and cutting attachment are completely stopped. Disconnect the spark plug wire before performing service or maintenance.

### WARNING!

Operating the engine without a muffler, or with a muffler that is damaged or improperly installed, can increase engine noise sufficiently to cause hearing loss.

## Fasteners

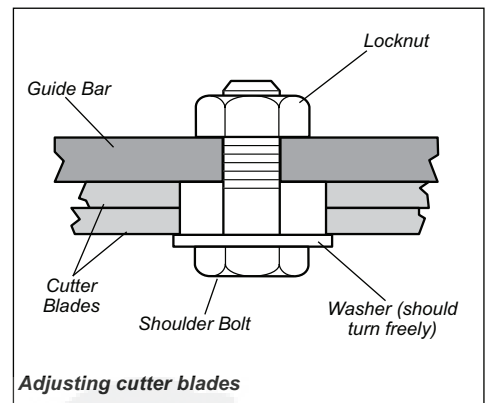
Make sure nuts, bolts, and screws (except carburetor adjusting screws) are tight.

3. Working from the gearcase end, lock each bolt in place by firmly tightening its locknut while preventing the shoulder bolt from turning.

When shoulder bolt adjustment is correct, there should be a gap of 0.25–0.50 mm between the cutter blades and the flat washers, and the flat washer beneath each bolt head should turn freely.

### CAUTION!

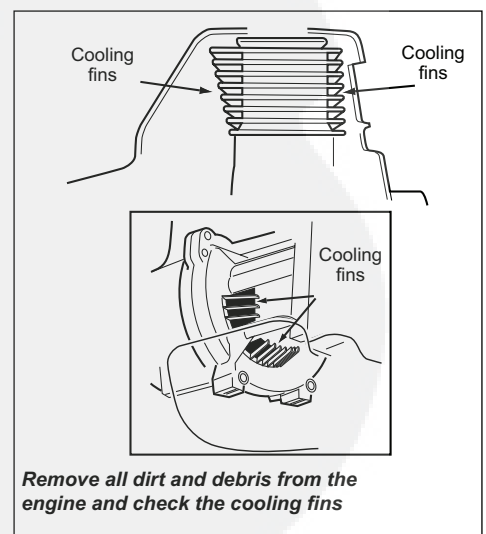
Operating the trimmer with worn or improperly adjusted cutters will reduce cutter performance and may also damage your machine. Never operate the machine with damaged or worn cutters.



### WARNING!

Always wear gloves when working around the cutter assembly.

- Clean any debris or dirt from the cutting attachment.
- Check for loose or missing screws or components. Make sure the cutter attachment is securely fastened.
- Check the entire unit for leaking fuel or grease.
- Make sure nuts, bolts, and screws (except carburetor idle speed adjusting screws) are tight.



## Maintenance (continued)

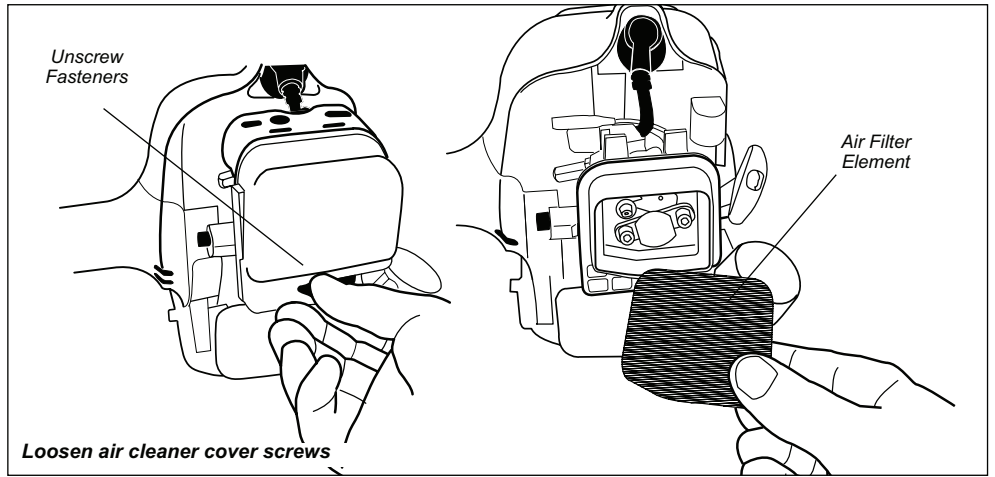
### 10-Hour maintenance

(more frequently in dusty conditions)

1. Remove the air cleaner cover by loosening the cover screw(s) and lifting.
2. Remove the air cleaner element.
3. Clean or replace as necessary.
  - Wash element thoroughly in soap and water.
  - Let element dry before reinstalling the element.
4. Replace air cleaner cover.

#### CAUTION!

Never operate the unit if the air cleaner assembly is damaged or missing!



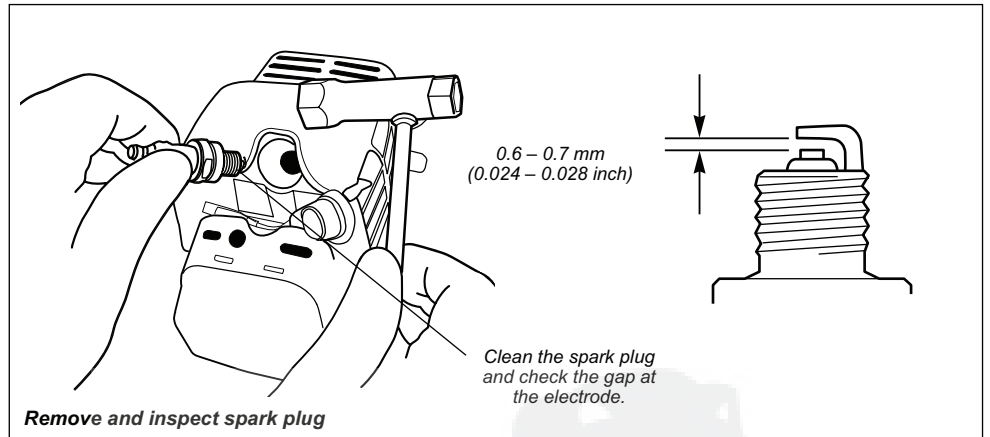
### 10/15-Hour maintenance

Remove and clean or replace the spark plug.

- Adjust the spark plug electrode gap to 0.6 - 0.7 mm (0.024 - 0.028 inch). If the spark plug must be replaced, use only an NGK BPMR6A or equivalent resistor type spark plug of the correct heat range.

#### CAUTION!

Before removing the spark plug, clean the area around the plug to prevent dirt and debris from getting into the engine's internal parts.



#### NOTE:

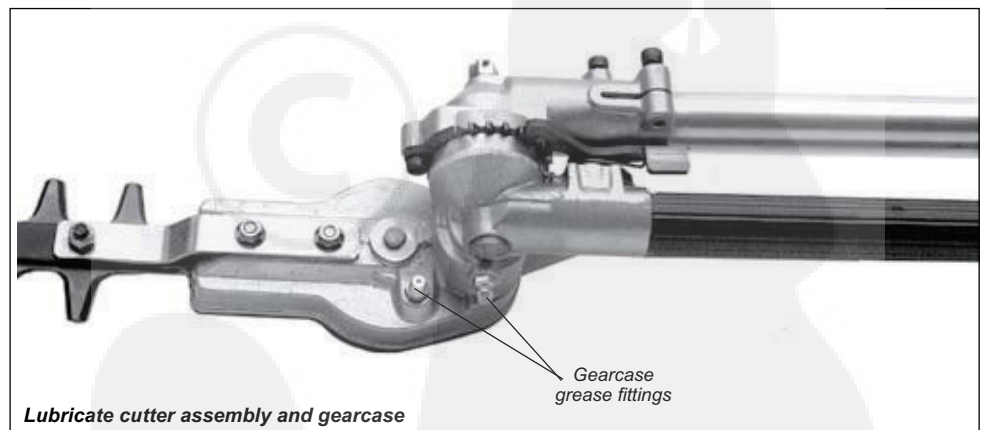
The NGK BPMR6A also meets the requirements for electro magnetic compliance (EMC).

### Gearcase lubrication

- Lubricate the cutter assembly gearbox by pumping one or two strokes of lithium-base grease into the grease fittings using a lever-type grease gun.

#### CAUTION!

Over lubricating can cause the gearcase to operate sluggishly and can cause grease to leak out.



## Maintenance (continued)

### 50-hour maintenance

Every 50 hours of operation; more frequently in dusty conditions:

- Remove and clean the cylinder cover and clean dirt and debris from the cylinder cooling fins.

#### Remove and replace the fuel filter element.

- Use a hooked wire to extract the fuel filter from inside the fuel tank. Inspect the fuel filter element. If it shows signs of contamination, replace with a genuine Shindaiwa replacement fuel filter element.

#### CAUTION!

Make sure you do not pierce the fuel line with the end of the hooked wire. The line is delicate and can be damaged easily.

Before reinstalling the new filter element, inspect the condition of all the fuel system components (fuel pick-up line, fuel return line, tank vent line, tank vent, fuel cap and fuel tank). If damage, splitting or deterioration is noted, the unit should be removed from service until it can be inspected or repaired by a Shindaiwa-trained service technician.

#### Gearcase lubrication

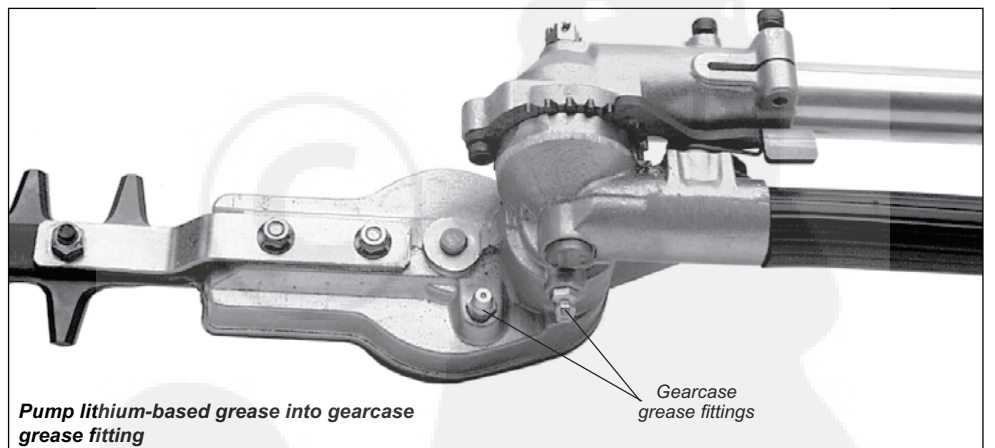
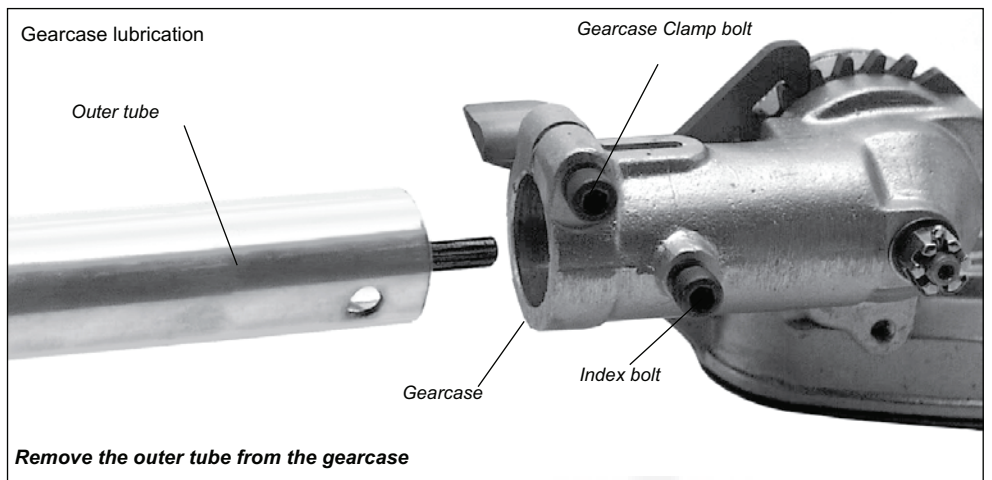
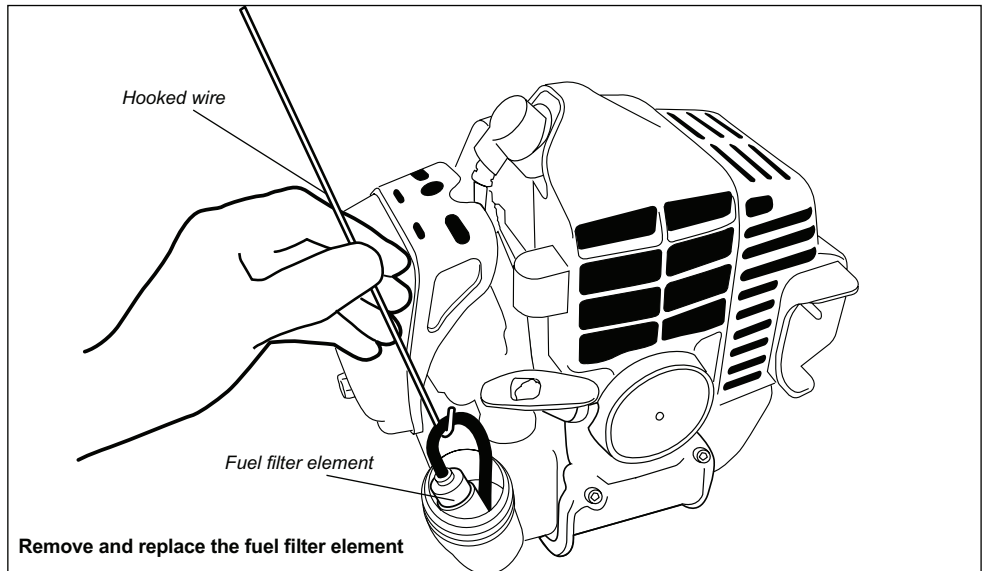
To perform this operation, first remove the gearcase from the outer tube as follows:

1. Loosen the gearcase clamp bolt.
2. Remove the index bolt from the gearcase.

#### CAUTION!

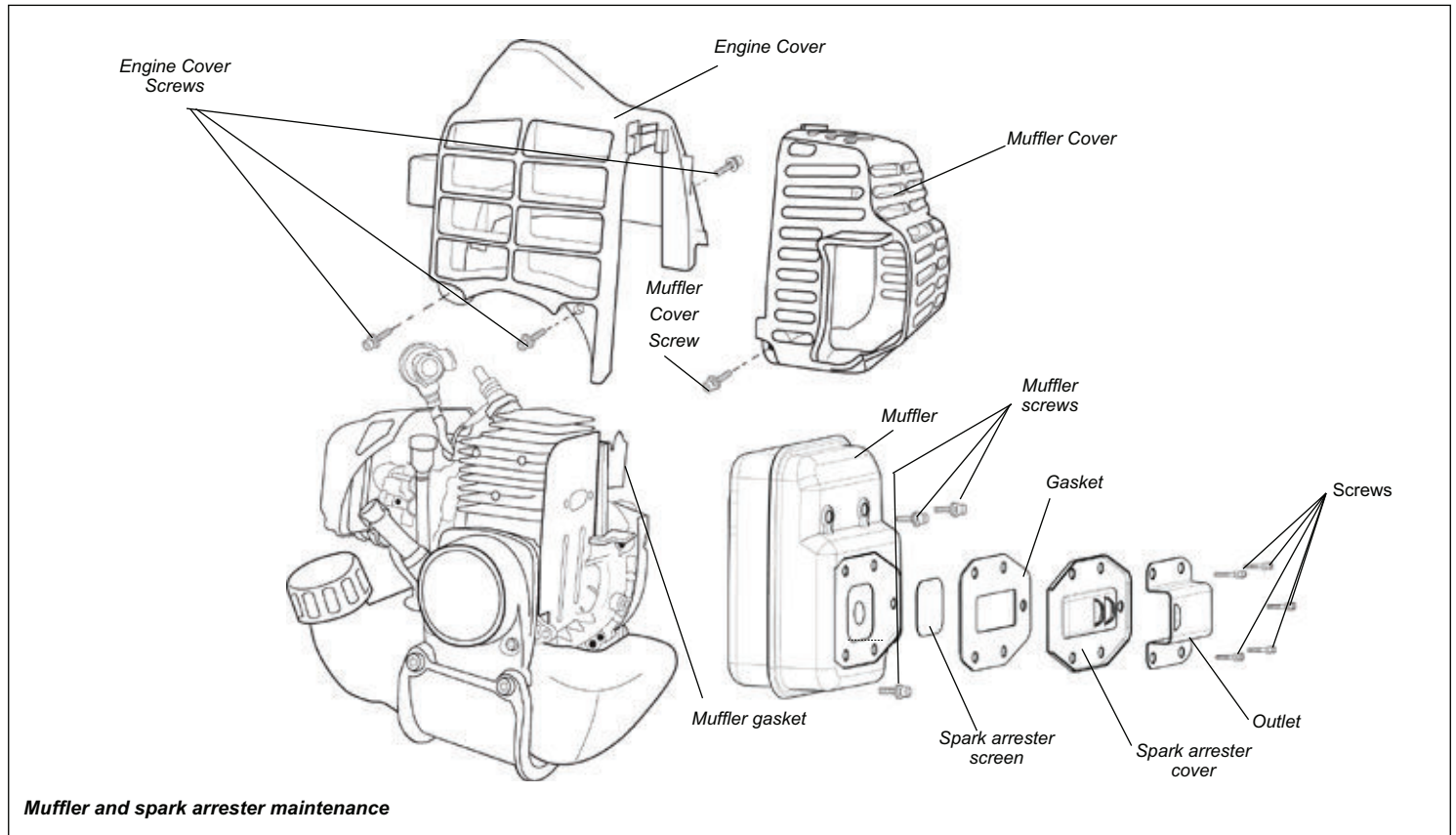
Do not remove the D-shaped shim washer from the gearcase clamp! The shim washer prevents damage from overtightening the tube clamp bolt.

3. Slide the gearcase out of the tube. Using a grease gun, pump lithium-base grease (about 10 grams) into the grease fittings on the gearcase until you see old grease being purged from the gearcase. Purged grease will be visible in the outer tube cavity.
4. Clean up excess grease, then reassemble the gearcase onto the outer tube. Make sure the index bolt fits into the hole on the outer tube. Securely tighten both bolts.



## Maintenance (continued)

### Muffler and spark arrester maintenance



If the engine becomes sluggish and low on power, check and clean the spark arrester screen.



#### **WARNING!**

Never operate the unit with a damaged or missing muffler or spark arrester! Operating with a missing or damaged spark arrester is a fire hazard and could also damage your hearing.

1. Remove the spark plug boot.
2. With a 3 mm hex wrench remove the one muffler cover screw, three engine cover screws, and the engine cover.
3. With a Phillips type screwdriver remove the five screws holding the spark arrester screen and cover to the muffler.
4. Remove the screen and clean it with a stiff bristle brush.
5. With a 4 mm hex wrench remove the three muffler bolts and the muffler.
6. Inspect the cylinder exhaust port for any carbon buildup.
7. Gently tap the muffler on a wood surface to dislodge any loose carbon.
8. Reassemble the spark arrester, muffler and engine cover in the reverse order of disassembly.

#### **IMPORTANT!**

If you note excessive carbon buildup, consult with an authorized Shindaiwa servicing dealer.

## Long Term Storage

Whenever the unit will not be used for 30 days or longer, use the following procedures to prepare it for storage:

- Clean external parts thoroughly.
- Drain all the fuel from the carburetor and the fuel tank.

To do so:

1. Prime the primer bulb until no more fuel is passing through.
2. Start and run the engine until it stops running.
3. Repeat steps 1 and 2 until the engine will no longer start.

#### **CAUTION!**

Gasoline stored in the carburetor for extended periods can cause hard starting, and could also lead to increased service and maintenance costs.

#### **IMPORTANT!**

All stored fuels should be stabilized with a fuel stabilizer such as STA-BIL.

#### **NOTE**

Damage caused by stale or contaminated fuel is not covered by the Shindaiwa warranty policy.

- Remove the spark plug and pour about 1/4 ounce of 2-cycle mixing oil into the cylinder through the spark plug hole. Slowly pull the recoil starter 2 or 3 times so oil will evenly coat the interior of the engine. Reinstall the spark plug.
- Before storing the unit, repair or replace any worn or damaged parts.
- Remove the air cleaner element from the carburetor and clean it thoroughly with soap and water, let dry and reassemble the element.
- Store the unit in a clean, dust-free area.



# Troubleshooting Guide

## ENGINE DOES NOT START

What To Check	Possible Cause	Remedy
Does the engine crank?	NO Faulty recoil starter. Fluid in the crankcase. Internal damage.	Consult with an authorized servicing dealer.
YES ↓		
Good compression?	NO Loose spark plug. Excess wear on cylinder, piston, rings.	Tighten and re-test. Consult with an authorized servicing dealer.
YES ↓		
Does the tank contain fresh fuel of the proper grade?	NO Fuel incorrect, stale, or contaminated; mixture incorrect.	Refill with fresh, clean unleaded gasoline with a pump octane of 87 or higher mixed with a 2-cycle mixing oil that meets or exceeds ISO-L-EGD and/or JASO FC classified oils at 50:1 gasoline/oil ratio.
YES ↓		
Is fuel visible and moving in the return line when priming?	NO Check for clogged fuel filter and/or vent.	Replace fuel filter or vent as required. Restart.
YES ↓		
Is there spark at the spark plug wire terminal?	NO The ignition switch is in "O" (OFF) position. Shorted ignition ground. Faulty ignition unit.	Move switch to "I" (ON) position and restart. Consult with an authorized servicing dealer.
YES ↓		
Check the spark plug.	If the plug is wet, excess fuel may be in the cylinder. The plug is fouled or improperly gapped. The plug is damaged internally or of the wrong size.	Crank the engine with the plug removed, reinstall the plug, and restart. Clean and regap the plug to 0.6mm-0.7mm (.024"). Restart. Replace the spark plug. Check the "Specifications" section for the correct plug for your unit. Restart.

## LOW POWER

What To Check	Possible Cause	Remedy
Is the engine overheating?	Operator is overworking the unit. Carburetor mixture is too lean. Improper fuel ratio. Fan, fan cover, cylinder fins dirty or damaged	Operate at slower rate. Consult with an authorized servicing dealer. Refill with fresh, clean unleaded gasoline with a pump octane of 87 or higher mixed with a 2-cycle mixing oil that meets or exceeds ISO-L-EGD and/or JASO FC classified oils at 50:1 gasoline/oil ratio. Clean, repair or replace as necessary.
Engine is rough at all speeds. May also have black smoke and/or unburned fuel at the exhaust.	Carbon deposits on the piston or in the muffler. Clogged air cleaner element. Loose or damaged spark plug. Air leakage or clogged fuel line. Water in the fuel. Piston seizure. Faulty carburetor and/or diaphragm	Consult with an authorized servicing dealer Clean or replace the air filter Tighten or replace the spark plug. Restart. Check the Product Specifications page in this manual for the correct spark plug for this unit. Repair or replace fuel filter and/or fuel line. Refill with fresh fuel/oil mixture. Consult with an authorized servicing dealer.
Engine is knocking.	Overheating condition. Improper fuel. Carbon deposits in the combustion chamber. Valve clearance set incorrectly.	Consult with an authorized servicing dealer. Check fuel octane rating; check for presence of alcohol in the fuel. Refuel as necessary. Consult with an authorized servicing dealer.

## Troubleshooting Guide (continued)

### ADDITIONAL PROBLEMS

What To Check	Possible Cause	Remedy
<p>Poor acceleration.</p>	<p>Clogged air filter. Clogged fuel filter. Lean fuel/air mixture. Idle speed set too low.</p>	<p>Clean or replace the air filter. Replace the fuel filter. Consult with an authorized servicing dealer. Adjust: 3,000 min<sup>-1</sup> (+/- 300).</p>
<p>Engine stops abruptly.</p>	<p>Switch turned off. Fuel tank empty. Clogged fuel filter. Water in the fuel.  Shorted spark plug or loose terminal.  Ignition failure. Piston seizure.</p>	<p>Reset the switch and re-start. Refuel. See Fuel section of manual. Replace fuel filter. Drain; replace with clean fuel. See Fuel section of manual.  Clean or replace spark plug. Check the Specifications page in this manual for the proper spark plug for your unit. Tighten the terminal.  Replace the ignition unit. Consult with an authorized servicing dealer.</p>
<p>Engine difficult to shut off.</p>	<p>Ground (stop) wire is disconnected or switch is defective Overheating due to incorrect spark plug  Overheated engine.</p>	<p>Test and replace as required. Replace the spark plug. Check the Specifications page in this manual for the proper spark plug for your unit. Idle engine until cool.</p>
<p>Cutting attachment moves at engine idle.</p>	<p>Engine idle too high. Broken clutch spring or worn clutch spring boss. Loose attachment holder.</p>	<p>Set idle: 3,000 min<sup>-1</sup> (+/- 300). Replace spring/shoes as required, check idle speed. Inspect and re-tighten holders securely.</p>
<p>Excessive vibration.</p>	<p>Warped or damaged attachment. Loose gearcase. Bent main shaft/worn or damaged bushings.</p>	<p>Inspect and replace attachment as required. Tighten gearcase securely. Inspect and replace as necessary.</p>
<p>Cutting attachment will not move.</p>	<p>Shaft not installed in powerhead or gearcase. Broken shaft. Damaged gearcase.</p>	<p>Inspect and reinstall as required. Consult with a authorized servicing dealer.</p>
<p>Top of engine is getting dirty and oily.</p>	<p>Valve cover is leaking.</p>	<p>Consult with an authorized servicing dealer.</p>

# DECLARATION OF CONFORMITY

We hereby declare the Shindaiwa Articulated Hedge Trimmer, Model AH242 (AH242S/EC2), meets the following respective requirements.

Council Directives:

89/336/EEC as amended  
98/37/EC as amended  
2000/14/EC as amended  
2004/26/EC as amended

Standard taken:

ISO 12100 - 1&2  
ISO 11680-1  
CISPR 12

Measured sound power level: 105 dB(A)  
Guaranteed sound power level: 107 dB(A)

Authorized representative in the European Community:

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Worldwide Corporate Advisors LLP  
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20 November 2008



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DIV. Manager  
Quality Assurance DIV.

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